Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A vehicle external recognition system comprising:

a relative position detecting section detecting an object ahead of a vehicle as a detected object to detect a relative position relationship between the detected object and the vehicle;

a relative velocity calculating section calculating a relative velocity between the detected object and the vehicle based on the relative position relationship detected by the relative position detecting section by using an initial value that is preset;

a vehicle velocity detecting section detecting a velocity of the vehicle; and

a motion attribute discriminating section discriminating a motion attribute, indicative of a motion state of the detected object, based on the relative velocity calculated by the relative velocity calculating section and the velocity detected by the vehicle velocity detecting section.

2. (Original) The vehicle external recognition system according to claim 1, wherein the relative velocity calculating section calculates a plurality of relative velocity candidates based on a plurality of different initial values that are preset.

3. (Original) The vehicle external recognition system according to claim 2, further comprising a relative velocity determining section selecting a relative velocity candidate, associated with the motion attribute discriminated by the motion attribute discriminating section, from among the plurality of relative velocity candidates calculated by the relative velocity calculating section, and determining the relative velocity candidate as a relative velocity between the detected object and the vehicle.

4. (Original) The vehicle external recognition system according to claim 2, wherein the plurality of relative velocity candidates are calculated by using an identical dynamic characteristic.

5. (Original) The vehicle external recognition system according to claim 2, wherein each of the plurality of initial values includes either one of a value corresponding to a case wherein the detected object is supposed to be a preceding vehicle running at the same velocity as the vehicle and a value corresponding to a case wherein the detected object is supposed to be a stationary object.

6. (Original) The vehicle external recognition system according to claim 5, wherein the motion attribute discriminating section discriminates the motion attribute based on a relative velocity candidate calculated based on the value corresponding to the case wherein the detected object is supposed to be the stationary object.

7. (Original) The vehicle external recognition system according to claim 3, wherein the relative velocity determined by the relative velocity determining section is used as a state variable of a running control section that controls a running state of the vehicle.

8. (Original) The vehicle external recognition system according to claim 7, wherein the relative velocity determining section determines the relative velocity candidate as the relative velocity so as to realize a control characteristic required to the running control section based upon the motion attribute discriminated by the motion attribute discriminating section.

9. (Original) The vehicle external recognition system according to claim 7, wherein the running control section controls a braking force of the vehicle based on the relative velocity determined by the relative velocity determining section.

10. (Original) The vehicle external recognition system according to claim 9, wherein the relative velocity calculating section calculates a relative velocity candidate by using an initial value, having a value corresponding to a case wherein the detected object is supposed to be a preceding vehicle running at the same velocity as the vehicle, and a relative velocity candidate by using an initial value having a value corresponding to a case wherein the detected object is supposed to be a stationary object, respectively, and the motion attribute discriminating section discriminates the motion attribute based on the relative velocity candidate which has the initial value having the value corresponding to the case wherein the detected object is supposed to be the stationary object.

11. (Original) The vehicle external recognition system according to claim 10, further comprising a running state detecting section detecting whether there exists a state that needs a measure to be rapidly taken with respect to the detected object.

12. (Original) The vehicle external recognition system according to claim 11, wherein when the running state detecting section discriminates that the state which needs the measure to be rapidly taken is absent, the relative velocity determining section determines the relative velocity candidate, as the relative velocity, having the initial value with the value corresponding to the case wherein the detected object is supposed to be the preceding vehicle running at the same velocity as the vehicle.

13. (Original) The vehicle external recognition system according to claim 11, wherein when the running state detecting section discriminates that the state which needs the measure to be rapidly taken is present, the relative velocity determining section determines the relative velocity candidate, as the relative velocity, having the initial value with the value corresponding to the case wherein the detected object is supposed to be the stationary object.

14. (Original) A vehicle external recognition system comprising:

relative position detecting means for detecting an object ahead of a vehicle as a detected object to detect a relative position relationship between the detected object and the vehicle;

relative velocity calculating means for calculating a relative velocity between the detected object and the vehicle based on the relative position relationship detected by the relative position detecting means by using an initial value that is preset;

vehicle velocity detecting means for detecting a velocity of the vehicle; and

motion attribute discriminating means for discriminating a motion attribute, indicative of a motion state of the detected object, based on the relative velocity calculated by the relative velocity calculating means and the velocity detected by the vehicle velocity detecting means.

15. (Currently Amended) A method ~~of recognizing vehicle external,~~ comprising:

detecting an object ahead of a vehicle as a detected object to detect a relative position relationship between the detected object and the vehicle;

calculating a relative velocity between the detected object and the vehicle based on the relative position relationship by using an initial value that is preset;

detecting a velocity of the vehicle; and

discriminating a motion attribute indicative of a motion state of the detected object based on the relative velocity between the detected object and the vehicle and the velocity of the vehicle.

16. (New) A vehicle external recognition system, comprising:

a relative position detecting section detecting an object ahead of a vehicle and a relative distance from the vehicle to the detected object;

a relative velocity calculating section setting a preset initial value as a relative velocity between the vehicle and the detected object immediately after first detecting the detected object and calculating the relative velocity based on the preset initial value and the detected relative position thereafter;

a vehicle velocity detecting section detecting a velocity of the vehicle; and

a motion attribute discriminating section discriminating a motion state of the detected object based on the relative velocity and the velocity of the vehicle.

17. (New) The vehicle external recognition system according to claim 16, wherein the preset initial value is equal to zero.

18. (New) The vehicle external recognition system according to claim 16, wherein the preset initial value is the velocity of the vehicle detected immediately after first detecting the detected object.

19. (New) The vehicle external recognition system according to claim 16, wherein the motion attribute discriminating section compares a difference between the relative velocity and the velocity of the vehicle to a threshold value to discriminate the motion state of the vehicle.

20. (New) A method for vehicle external recognition, comprising:

detecting an object ahead of a vehicle and a relative distance from the vehicle to the detected object;

setting a preset initial value as a relative velocity between the vehicle and the detected object immediately after first detecting the detected object;

calculating the relative velocity based on the preset initial value and a detected relative position thereafter;

detecting a velocity of the vehicle; and

discriminating a motion state of the detected object based on the relative velocity and the velocity of the vehicle.

21. (New) The method according to claim 20, wherein the preset initial value is equal to a value of a relative velocity between the vehicle and the detected object when the detected object is moving at the same velocity as the velocity of the vehicle.

22. (New) The method according to claim 20, wherein the preset initial value is equal to a value of a relative velocity between the vehicle and the detected object when the detected object is stationary.